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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/501,710

07/19/2004

Timo Mattila

43289-204885

7141

26694

7590

06/22/2007

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EXAMINER

WILSON, DEMARIS R

ART UNIT

PAPER NUMBER

1731

MAIL DATE

DELIVERY MODE

06/22/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/501,710

Applicant(s)

MATTILA, TIMO

Examiner

DeMaris R. Wilson

Art Unit

1731

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 July 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 11-26 is/are rejected.
- 7) ☒ Claim(s) 21 and 26 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 July 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
- Paper No(s)/Mail Date 7/19/2004.

- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Objections

1. Claim 26 is objected to because of the following informalities: It is considered that applicant meant to recite "11" in place of "1", thereon line 1 of claim 26.

Appropriate correction is required.

2. Claim 21 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

Specification

3. The disclosure is objected to because of the following informalities:

Page 8- line 37, "cooling channels" are referred to at reference numeral "21" in the specification but they appear to be identifying fasteners in the Figs.

Page 9- line 7, (as well as other locations in the specification)- "fastening means" are referred to as reference numeral "22" in the specification but it appears to be identifying cooling channels in the Figs.

Page 3- line 20, the reference to claim 1 in the specification should be deleted as claims are often deleted or renumbered during prosecution and any finally patented claim 1 can be substantially different from claim 1 as filed.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 11-26 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Regarding claim 11 thereon line 14, it is unclear how a force seals the gas tube to the end of the heating element.

5. Regarding claim 12, it is considered to be indefinite as it is not clear how it structurally limits the drawing furnace of claim 11 as no structure is recited in the instant claim. Regarding claims 15 and 16, the phrase "or the like" renders the claim(s) indefinite because the claim(s) include(s) elements not actually disclosed (those encompassed by "or the like"), thereby rendering the scope of the claim(s) unascertainable. See MPEP § 2173.05(d). With respect to instant claims 22, 23 and 24, the recitation of "a gas tube" renders the claim indefinite as it is not clear if it is referring to a gas tube different from the previously recited gas tube in claim 11 or if it is referring to the same tube, if it is referring to the same tube a nexus between the two should be provided.

6. Claim 11 recites the limitation "the gas flow surrounding the fiber preform" in line 8. There is insufficient antecedent basis for this limitation in the claim. Claim 19 recites the limitation "the hole(s)" in lines 2/3 of claim 19; "the gas space", "the channels" and "said gas space" in lines 1-3. There is insufficient antecedent basis for these limitations in the claim.

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7. Claims 20 and 21 recites the limitations "the gas space", "the channels", "said gas space" and "the entire circle". There is insufficient antecedent basis for these limitations in the claims.
8. Therein claims 22, 23 and 24, "the first inner tube" and "the second inner tube" lack antecedent basis.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 11, 12 and 18--26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lysson et al <US 5897681> in view of Yoon et al <US 2001/0005992>. Lysson, regarding claims 11- 12 and 25-26, discloses an apparatus for drawing an optical fiber (10) from a glass preform (9) having (see Figure and column 3 lines 12-57)

- a. A tubular heating element (2) surrounding the fiber preform, for heating the fiber preform
- b. An outside insulating layer (3) of the heating element
- c. A frame part (7) of the drawing furnace in order to place said heating element and said insulating layer in the drawing furnace

- d. A cover part (11/12) to close the area surrounding the insulating layer from the gas flow surrounding the fiber preform
- e. A gas tube (13) with holes, or nozzles, (15) fitted between cover part (11/12) and heating element (2)
- f. A cover part (12) fitted mobile in relation to the frame

While Lysson does reasonably suggest having a cover part, or seal (12), that can be fitted mobile, or as disclosed (see column 3 lines 23-25) as could be used. This suggestion does not explicitly recite such mobility; however, it is considered that such a seal can be moved, ie taken off, as the embodiment is fully function with/without the seal. Moreover, as Lysson suggests such a mobile seal yet is silent on it's explicit mobility, Yoon does teach having a cap (130) to be rotated (ie fitted mobile) in a apparatus for optical fiber preform fabrication. It is considered that the force between the cover part and heating element can be adjusted because of Lysson's disclosure of an apparatus for drawing an optical fiber being fully functional with/without the seal (12). Therefore, the force on the coverpart and heating element can be adjusted, as in one embodiment there would be no force on the coverpart as it's not there thus adjusting the force. It is considered that it would have been obvious to one of ordinary skill in the art at the time of invention to have combined Lysson's disclosure with the teachings of Yoon to have a drawing furnace for manufacturing an optical fiber to have a cover part/ seal to ensure that no gas escapes out of the gas chamber to provide a more uniform gas supply to the drawing region of the preform.

12. Regarding claims 18-21, Lysson's disclosure comprises having nozzles in the gas tube (see column 3 lines 26-30) to provide a uniform gas supply into the annular space formed by the surface of the preform.

13. Regarding claims 22-24, Lysson's apparatus comprises a gas tube (14) between a first inner tube space and a second inner tube space.

14. Claims 13-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lysson et al <US 5897681> and Yoon et al <US 2001/0005992>, as applied to claims 11-12 above, and further in view of Bloom <US 6003341>. Regarding claims 13-17, Lysson discloses an apparatus for drawing an optical fiber having additional arrangements that are appreciable to one skilled in the art. Yoon teaches the limitations as recited earlier in the office action. However, Yoon does not suggest having fastening means. Lysson does suggest such a means yet is silent on having such a feature. Bloom however does reasonably suggest having such a feature as recited in the instant claims. It is considered that the disclosure of Lysson's apparatus for drawing an optical fiber having additional arrangements of which being appreciable to one of ordinary skill in the art (see column 4 lines 7-10) in view of the teachings, as applied to claims 11-12 above, of Bloom drawn to fasteners/fastening means (ie cable ties, screws, springs etc.) to combine different components used in a device for making fiber couplers (see column 25 lines 56-60). It is therefore considered that it would have been obvious to one of ordinary skill in the art at the time of invention to have an additional arrangement of Lysson's apparatus for drawing an optical fiber wherein some type of fastening means

is used to connect different components of the apparatus to provide a larger range of motion of the components in the apparatus.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US 20020005052 drawn to a fiber optic draw furnace

US 20010046358 drawn to an optical fiber

US 6257023 drawn to a fiber optic drawn furnace

US 6192715 drawn to a furnace for forming optical fiber

US 4547644 drawn to a furnace for forming optical fiber.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DeMaris R. Wilson whose telephone number is 571.272.6377. The examiner can normally be reached on 9-5 Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on 571.272.1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

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USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

DeMaris R. Wilson
Examiner
Art Unit 1731

DRW
6/13/07


STEVEN P. GRIFFIN

SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700